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PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Tadashi UEMATSU et al.

Group Art Unit: 2834

Application No.: 10/614,201

Examiner: P. Cuevas

Filed: July 8, 2003

Docket No.: 116441

For: CONTROL APPARATUS FOR ELECTRICAL GENERATOR OF VEHICLE

REQUEST FOR RECONSIDERATION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In reply to the December 21, 2004 Office Action, reconsideration of this application is respectfully requested. Claims 1-6 are pending in this application.

I. Priority Document

Applicants respectfully request acknowledgment of receipt of the certified priority document filed on July 8, 2003.

II. Information Disclosure Statement

Applicants respectfully request acknowledgment of receipt and consideration of References 3 and 4 listed on the Form PTO-1449 filed on July 8, 2003. The relevance of References 3 and 4 is discussed in the specification, as indicated on the Information Disclosure Statement which accompanied the Form PTO-1449.

III. Claim Rejections Under 35 U.S.C. §102

Claims 1-4 are rejected under 35 U.S.C. §102(b) as anticipated by U.S. Patent No. 4,477,766 to Akita et al. The rejection is respectfully traversed.

Akita fails to disclose each and every feature recited in the rejected claims. For example, Akita fails to disclose a control apparatus for an electrical generator of a vehicle, comprising switch means coupled to supply a drive current to display means which indicate a power generating status of the electrical generator, the switch the supply of driver current means operable for interrupting drive current, current detection means for detecting a level of current flow through the switch means, reference value generating means for determining a reference value to be compared with the detected level of the current, ... wherein the reference value generating means successively outputs a plurality of reference values, including a first reference value corresponding to a current value which is greater than a maximum value of surge current which flows in the switch means, and a second reference value which corresponds to a current value that is greater than a normal value of current which flows in the switch means, as recited in claim 1.

The current detection means of claim 1 recites a means for detecting a level of current flow through the switch means. The switch means is claimed to be coupled to supply a drive current to a display means which indicate a power generating status of the electrical generator, the switch means operable for interrupting the supply of drive current.

Akita is silent regarding a means for detecting the level of current flow through the display lamp 500. For example, the purpose of the transistors 1 and 2 that are coupled to the load 600 and the ignition indication lamp 500 is to controllably switch current flow through either the lamp 500 or the load 600 (col. 3, lines 41-56). Therefore, Akita fails to disclose either the switch means or the current detection means, as recited in the claims.

In rejecting the claims, the Office Action alleges that Akita discloses reference value generating means as recited in the pending claims. Specifically, the Office Action alleges that a value V_{th1} is a first reference value corresponding to a current value which is greater than a maximum value surge current which flows in the switch means, and that a value V_{th2}

corresponds to a current value that is greater than a normal value of current which flows through the switch means. However, the two reference voltages values V_{th1} and V_{th2} , as disclosed in Fig. 1, are continuously generated concurrently. As shown in Fig. 2 (diagrams 4 and 5) the circuit formed of comparators 53, 54, etc. serves to detect whether the output voltage of the vehicle generator, i.e., the P-voltage from a phase winding 18, exceeds the upper threshold value V_{th2} or falls below the lower threshold value V_{th1} .

The Office Action further alleges that Akita discloses establishing successively shorter respective durations outputting the reference values in accordance with respective magnitudes of the reference values and repetitively outputting a plurality of reference values in succession at a fixed repetition period.

Applicants disagree with the interpretation of the reference. The reference voltage V_{ref} shown in Fig. 1 of Akita is produced by a resistive voltage divider operating on the voltage across a zener diode 9. The entire purpose of a zener diode in such an application is to produce a fixed, continuous reference voltage, irrespective of changes in the voltage that is the source of the current flow through the zener diode. In Fig. 1 the source would equate to the vehicle battery voltage. The reference voltages V_{th1} and V_{th2} are each produced by resistive voltage dividers operating on the reference voltage V_{ref} so that these voltages are each fixed and continuously-produced voltages. Accordingly, Akita fails to disclose each and every feature recited in the rejected claims. Thus, withdrawal of the rejection of claims 1-4 under 35 U.S.C. §102(b) is respectfully requested.

IV. Claim Rejections Under 35 U.S.C. §103

Claims 5 and 6 are rejected under 35 U.S.C. §103(a) as unpatentable over Akita in view of U.S. Patent No. 4,825,330 to Walchie. The rejection is respectfully traversed.

Claims 5 and 6 are allowable for at least their dependency on independent claim 1 for the reasons discussed above, as well as for the additional features recited therein.

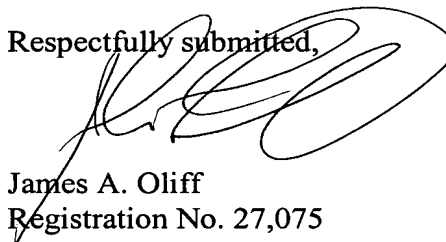
Accordingly, withdrawal of the rejection of claims 5 and 6 under 35 U.S.C. §103(a) is respectfully requested.

V. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Date: March 21, 2005

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